

Attorney's Docket No. <u>004501-631</u> Application No. 10/009.800

CLAIM SUMMARY DOCUMENT:

Claims 1-21 (Canceled)

Claim 2/2 (New) An electrical switching device comprising:

a microrelay switch which is arranged in a current path and has microrelay cells connected in series as a voltage divider and connected in parallel as a current divider, having a current sensor which detects the current flowing in the current path;

an evaluation device for receiving and evaluating the current signals detected by the current sensor and for forming a tripping signal, which acts on the microrelay switch, if the current being carried in the current path exceeds a threshold value; and

a short-circuit current limiter arranged in the current path such that the short-circuit current limiter is connected in series with the microrelay switch; wherein

the switching device is designed such that the microrelay switch opens in response to the tripping signal for small overcurrents that are greater than the threshold value, and, in the event of large overcurrents, the short-circuit current limiter limits these overcurrents to currents which can be interrupted by the microrelay switch.

Claim 23 (New) The electrical switching device as claimed in claim 22, wherein the evaluation device causes the microrelay switch to respond with a short time delay as a function of the magnitude of any overcurrent.

P.06

Attorney's Docket No. 004501-631 Application No. 10/009,800

Claim 24 (New) The electrical switching device as claimed in claim 22, wherein the short-circuit current limiter is a fuse link.

Claim 25 (New) The switching device as claimed in claim 22, wherein the shortcircuit current limit can be uploaded electrically, and the evaluation device is designed to transmit a second tripping signal to the short-circuit current limiter in the event of large overcurrents.

Claim 26 (New) The electrical switching device as claimed in claim 22, wherein the short-circuit current limiter is a power breaker.

Claim 27 (New) The electrical switching device as claimed in claim 22, wherein the short-circuit current limiter is a PTC thermistor.

Claim 28 (New) The electrical switching device as claimed in claim 27, wherein the PTC thermistor contains a PTC polymer material.

Claim 29 (New) The electrical switching device as claimed in claim 27, wherein the PTC thermistor contains a PTC metal material.



Attorney's Docket No. <u>004501-631</u> Application No. <u>10/009.800</u> Page 4

What was

Claim 30 (New) The electrical switching device as claimed claim in 22, wherein the evaluation device is designed for receiving and evaluating signals from a first current sensor, which detects the current through the current path, and from a second current sensor, which detects a current through a second current path, by comparing them with one another and opening the microrelay switch in response to a result of the evaluation.

Claim 31 (New) The electrical switching device as claimed in claim 22, wherein the current sensor is a total current sensor which detects a total current through the current path and through at least one second adjacent current path, and the evaluation device is designed for receiving and evaluating a signal from the total current sensor and for opening the microrelay switch in response to that signal.

Claim 32 (New) The electrical switching device as claimed in claim 22, wherein at least one current sensor is part of the switching device and is in the form of a Hall sensor.

Claim 33 (New) The electrical switching device as claimed in claim 32, wherein the evaluation device and the Hall sensor or sensors are integrated on a chip.

Claim 34 (New) The electrical switching device as claimed in claim 32, wherein the microrelay switch, the evaluation device and the Hall sensor or sensors are integrated on one chip.



Attorney's Docket No. 004501-631 Application No. 10/009,800

Claim 35 (New) The electrical switching device as claimed in claim 22, wherein the microrelay switch, the evaluation device and, possibly, the Hall sensor or sensors are each integrated as chips on a circuit board.

URNS DOANE

Claim 36 (New) The electrical switching device as claimed in claim 22, wherein the microrelay switch and the evaluation device are integrated on one chip.

Claim 37 (New) The electrical switching device as claimed in claim 22, wherein an electronic response monitoring device is integrated, with the microrelay switch, on one chip.

Claim 38 (New) The electrical switching device as claimed in claim 32, wherein a timer circuit is integrated, with the microrelay switch, on one chip.

18. Claim 39 (New) An electric motor switching and protection system having an electrical switching device as claimed in claim 2.